**Before the**
**Federal Communications Commission**
**Washington, D.C. 20554**

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| In the Matter of | ) | CC Docket No. 02-6 |
| Draft Eligible Services List | ) | GN Docket No. 09-51 |
| for Schools and Libraries | ) | WC Docket No. 13-184 |
| Universal Service Program | ) | |

**COMMENTS OF THE NEW YORK CITY DEPARTMENT OF EDUCATION
ON THE DRAFT ELIGIBLE SERVICES LIST FOR SCHOOLS AND LIBRARIES
UNIVERSAL SERVICE PROGRAM FOR FUNDING YEAR 2015**

The New York City Department of Education, pursuant to the Public Notice released on August 4, 2014 (DA 14-1130), hereby respectfully submits its observations and comments on the Draft Eligible Services List for the schools and libraries universal support mechanism for Funding Year 2015.

**Background**

The New York City Department of Education (NYC DOE) encompasses approximately 1,800 individual school organizations located in about 1,300 buildings. In this setting, more than one million students are taught every day. Meeting the instructional technology needs of the student population is often daunting. Adding to the obvious challenges related to a school system this size are the realities of negotiating a network infrastructure in an aging portfolio of school buildings. More than 75% of the school buildings are over 40 years old and approximately 31% were built before 1930. Building and sustaining a network infrastructure that provides wireless Internet access to more than 597,000 computing devices in so many different locations is a significant logistical and financial challenge.

The support of the schools and libraries universal support program (more commonly known as the E-rate program) enabled the NYC DOE to radically transform the schools' technology environment and allow students and educators to access the resources of the Internet for assessment, instruction and enrichment. The landmark *E-rate Modernization Order,* adopted by

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the Federal Communications Commission (FCC) in July 2014, takes major steps to modernize and streamline the E-rate program by focusing on expanding funding for Wi-Fi networks.

The Wireline Competition Bureau seeks comment on a draft eligible services list (ESL) for the E-rate program for funding year 2015. The draft ESL restructures and streamlines the list of eligible services components to focus support on the services and components needed for broadband connectivity within schools, while eliminating support for other services and components that are not necessary for high-capacity broadband. NYC DOE believes that the changes made to the draft ESL reflect the goals of the *E-rate Modernization Order* and are conducive to providing schools and libraries with the technology and connectivity that meets their requirements. The presentation and formatting changes made to the draft ESL have certainly produced a shorter document. However, NYC DOE does see value in retaining some of the removed guidance on the USAC website, such as the ESL glossary, even if it can only be used for informal assistance.

## Network Installations

### *Equipment and Service Installations*

NYC DOE agrees with the proposed change to allow E-Rate funding for installation services from vendors that do not supply the eligible equipment to be installed. The location of some schools may prevent the selected vendor from using their workforce to install equipment and services due to local rules and regulations (e.g., local union labor must be used) or other limitations. In these situations, it may be difficult to utilize only one vendor for both equipment purchases and installation. Additionally, it may be more cost effective to contract with independent providers who will perform the installation of eligible components purchased from manufacturers or resellers. Savings could be substantial in these situations as schools would be able to take advantage of lower rates in the area and avoid additional fees charged by manufacturers or resellers for travel to areas outside of their normal regions.

## Continuous Network Connectivity

### *Caching*

NYC DOE agrees with the proposed change to include caching as an eligible broadband internal connections component for funding years 2015 and 2016; however, we believe that its eligibility should continue beyond 2016. Caching is critical in providing school with fast access to learning materials, content, and programs. Caching assists with the effective management of networks without having to continually increase bandwidth, thereby reducing costs in the long run.

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Caching should be defined as products and services that enable users to optimize their networks by effectively reducing and optimizing video traffic, while managing bandwidth needs and providing tools for web traffic management and filtering to protect users. Eligible equipment should include caching engines and appliances that are capable of caching static web content and video content. Engines should be capable of stream-splitting of live and real-time video as well as supporting Web Cache Communication Protocol (WCCP) for easy integration with existing infrastructure appliances.

*Network Uptime*

The E-rate program facilitated the NYC DOE in meeting the technological and connectivity needs of our schools, teachers, and students. However, schools experience occasional system downtime for various reasons, including equipment failure and network issues. In fiscal year 2014 (July 1, 2013 – June 30, 2014), there were 1,136 system outages that affected 422 DOE school buildings. This resulted in 85,355 hours of downtime with each system outage averaging approximately 3 days. These occurrences were unplanned downtime, which severely affected the connectivity at the schools. It is understood that regular maintenance (basic and additional maintenance) may alleviate downtime; however, measures should be considered to prevent such incidents. We are requesting that the E-rate program include services, such as wireless backup connection services subscriptions and pay-per-use backup services, or allow the use of multiple vendors (as discussed more fully below), which guard schools against unplanned downtime.

*Use of Multiple Vendors*

In our *Request for Review of a Decision of the Universal Servicer Administrator* (CC Docket No. 02-6) submitted to the FCC on January 31, 2014, NYCDOE filed an appeal regarding the use of multiple selected vendors to ensure all schools have continuous and reliable network access. In the appeal, NYC DOE explained our decision to select two vendors to provide internet service in order to ensure sufficient connectivity for online learning, state testing and assessment, and internet based programs for over a million students. For an entity of NYC DOE's size, utilizing a single provider may not be an effective solution as providers may oversubscribe their networks, which leads to bottlenecks during peak periods. Although two providers were utilized, there was no duplication in services since each school only received services from one provider on any given day. DOE was able to dynamically manage traffic between the two providers so that each was used at 80% capacity and so that the providers' bottlenecks are less likely to affect schools' access to the internet.

Multiple vendors allow the NYC DOE to provide internet access to all schools without sacrificing speed or network availability. The use of multiple vendors presents a load sharing solution that ensures reliable and consistent service. Furthermore, having multiple vendors

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provides the NYCDOE with a contingency plan to address natural disasters (*e.g.*, Hurricane Sandy) or other forms of prolonged disruptions. During these times, network load can be shifted to affected areas to allow them to enjoy undisrupted network connectivity. We request that a decision be reached on the eligibility of using multiple vendors as long as certain guidelines are followed:

1) Ability to demonstrate that the FCC's *Macomb Order* was not violated, recognizing that requests for duplicative services, described as "services that provide the same functionality for the same population in the same location for the same period of time," will be rejected.
    a. Use of multiple vendors will not duplicate services for schools.
    b. A detailed plan, network configuration, or other analysis would be provided to illustrate that eligible services are not duplicated by the vendors.
    c. At no time would the vendors serve the same location or carry traffic from the same location simultaneously.
2) Adequate justification that one single vendor cannot effectively provide service to all schools, thus leaving some schools with poor connectivity and more frequent instances of unplanned network downtime.
3) No more than two vendors can be used at the same time.
4) Proof that all other FCC guidelines are followed in the selection of multiple vendors (e.g., competitive bidding, using price of E-rate eligible goods/services as the primary decision factor, etc.).

The FCC should allow the use of multiple vendors as part of the E-rate program, within certain parameters. Selecting two non-duplicative service providers would facilitate NYCDOE's ability to create a resilient and load-balanced data network to fulfill mission critical educational requirements.

**Conclusion**

The E-rate program has had a historic impact, accelerating positive changes in the school environment. At the time of the program's inception, classroom connectivity to the Internet was rare in availability and limited in capacity. Today, classrooms without internet access are the exceptions and even students in the earliest grades are regularly using a "world" of educational resources. Building and maintaining the necessary infrastructure for Internet access without E-rate funding would have confronted school districts with an insurmountable fiscal obstacle. The *E-rate Modernization Order* takes major steps to continue the FCC's focus on ensuring affordable access to high-speed broadband. The draft ESL clearly exhibits the intent of this landmark Order.

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NYCDOE has responded to the proposed changes and the questions posed in the draft ESL and also provided additional suggestions regarding network installations and providing schools with continuous network connectivity. Network installations should address any specific instances where local rules and regulations may prevent the selected vendor from installing equipment and services. Other vendors may be required to perform such services and, at this time, are not eligible for E-rate funding. It is also important that continuous network connectivity be a focus for improvement. This includes allowing schools to explore additional services that will protect them from unplanned system downtime which may impede learning.

The New York City Department of Education respectfully requests that the Wireline Competition Bureau consider these comments to the draft eligible services list, or other eligibility guidance, for funding year 2015.

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